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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/049,157	02/01/2002	Michael Franklin Glass	02004.056	8262

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EXAMINER

ROSENBERG, LAURA B

ART UNIT	PAPER NUMBER
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3616

DATE MAILED: 05/25/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/049,157	<b>Applicant(s)</b> GLASS, MICHAEL FRANKLIN	
	<b>Examiner</b> Laura B Rosenberg	<b>Art Unit</b> 3616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 18 March 2004.
- 2a) ☐ This action is FINAL.
- 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-5,7,8 and 10-19 is/are pending in the application.
  - 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5,7,8 and 10-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
  - Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
  - Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    - a) ☒ All    b) ☐ Some \*    c) ☐ None of:
    - 1. ☐ Certified copies of the priority documents have been received.
    - 2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    - 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. This office action is in response to the amendment received on 18 March 2004, in which claims 1, 3, 7, 10, and 12 were amended, claims 18 and 19 were added, and claim 6 was canceled.

### ***Specification***

2. The disclosure is objected to for not sufficiently describing the auxiliary spring means comprising "the means arranged to detect the height across the vehicle and to adjust the auxiliary spring means to compensate for any difference in height."

Appropriate correction is required.

### ***Claim Objections***

3. Claims 1, 3, and 12 are objected to because of the following informalities:  
"the associated vehicle axle" should be --an associated vehicle axle-- (claims 1, 3, line 3);  
"at position" should be --at a position-- (claim 12, line 2).

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 1-5, 7, 8, and 10-17 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Specifically, the "means arranged to detect height across the vehicle" has not been adequately disclosed in the specification so as to enable one skilled in the art to make and/or use the invention.

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 1-5, 7, 8, and 10-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In regards to the last few lines of claims 1, 3, and 10, the examiner can interpret this portion of the claims in the following two distinctly different ways:

a.) Height across the vehicle is detected and the auxiliary spring means is adjusted to compensate for a difference in height between the left and right sides of the vehicle.

b.) Height across the vehicle is detected and the auxiliary spring means is adjusted to compensate for a difference in height between an intended/optimal height across the vehicle and the actual height detected.

For clarification purposes, the applicant should reword this portion of the claims.

***Claim Rejections - 35 USC § 102***

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1-5, 7, 8, and 10-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Brownier et al. (3,231,258). In regards to claims 1, 3, 8, 10, and 17, Brownier et al. disclose a suspension system (best seen in figures 6, 8) for a vehicle wheel set (#24) comprising an upper leaf spring (#144, 168) and a lower leaf spring (#146, 170), each being mounted on opposed sides of an associated vehicle generally transversely of an associated vehicle axle (#20), one end (left side in figures 6, 8) of each upper and lower leaf spring comprising connection means (#40, 150, 176, 178, 179) for attachment thereof to an associated vehicle chassis (#22), the lower leaf spring being mounted over the associated vehicle axle with an opposite end thereof (right side in figures 6, 8) forming a further connection means (#44, 152, 154, 156, 180, 182, 184) for attachment thereof to the associated vehicle chassis, and auxiliary spring means (#34, 36) mounted in series with the upper leaf spring (best seen in figures 6, 8), wherein the auxiliary spring means comprises means (including #83-88) arranged to detect height across the vehicle and to adjust the auxiliary spring means to compensate for any difference in height (column 4, lines 3-36), and the auxiliary spring means is arranged to alter a deflection rate of the suspension system in proportion to an imposed load at constant ride height (column 5, lines 4-39). With regards to auxiliary spring

means being arranged to provide the associated vehicle with ride characteristics and dynamic deflection geometry substantially the same as those of a conventional leaf spring system in order to mimic the dynamic deflection geometry of a conventional leaf spring system around the normal loading range, while Brownier et al. is able to perform this function, this is a strictly functional limitation that has not been positively claimed, and therefore does not serve to distinguish.

In regards to claims 2 and 11, Brownier et al. disclose the auxiliary spring means (specifically #36) being mounted in series with the upper leaf spring (#144, 168) at an end (right side in figures 6, 8) thereof distant from the connection means (#40, 176, 179) for attaching one end (left side in figures 6, 8) of each upper and lower leaf spring to the associated vehicle chassis (#22).

In regards to claims 4 and 14, Brownier et al. disclose the auxiliary spring means (#34, 36) comprising an air spring (column 2, lines 60-61).

In regards to claims 5 and 15, Brownier et al. disclose the auxiliary spring means comprising a mechanical spring means (including motion transmitting linkage and lever #124, 126).

In regards to claims 7 and 16, Brownier et al. disclose the system being arranged to obviate or substantially reduce torsion being applied to the axle (column 3, line 67-column 4, line 2) and thereby maintain the full axle control of a conventional leaf spring system. The examiner notes that this limitation is strictly functional and not positively claimed; therefore it does not serve to distinguish.

In regards to claim 12, Brownier et al. disclose the auxiliary spring means (specifically #36) mounted in series with the upper leaf spring (#144, 168) at a position on the upper leaf spring that is intermediate the associated vehicle axle (#20) and the further connection means (#44, 152, 154, 156, 180, 182, 184) attaching the opposite end of the lower leaf spring (#146, 170) to the associated vehicle chassis (#22) in a direction transverse to the associated vehicle axle (best seen in figures 6, 8).

In regards to claim 13, Brownier et al. disclose an opposite end (right side in figures 6, 8) of the upper leaf spring being spaced above the lower leaf spring, and the auxiliary spring means being mounted on the opposite end of the upper leaf spring (best seen in figures 6, 8).

In regards to claim 18, Brownier et al. disclose a suspension system (best seen in figure 8) for a vehicle wheel set (#24) comprising an upper leaf spring (#168) and a lower leaf spring (#170), each being mounted on opposed sides of an associated vehicle generally transversely of an associated vehicle axle (#20), one end (left side in figure 8) of each upper and lower leaf spring comprising connection means (#176, 178, 179) for attachment thereof to an associated vehicle chassis (#22), the lower leaf spring being mounted over the associated vehicle axle with an opposite end thereof (right side in figure 8) forming a further connection means (#180, 182, 184) for separate attachment thereof to the associated vehicle chassis, and auxiliary spring means (#34, 36) mounted in series with the upper leaf spring (best seen in figure 8) towards an opposite end (right side in figure 8) thereof for separately attaching the opposite end of

the upper leaf spring to the associated vehicle chassis (via upper leaf spring connection to #66, 34, 36; best seen in figure 8).

In regards to claim 19, Brownier et al. disclose the auxiliary spring means being mounted on the upper leaf spring on a part thereof spaced above the lower leaf spring (best seen in figure 8).

### ***Response to Arguments***

10. Applicant's arguments with respect to claims 1-5, 7, 8, and 10-19 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Jensen et al., Bockewitz, and Walton et al. disclose suspension systems with leaf spring assemblies.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laura B Rosenberg whose telephone number is (703) 305-3135. The examiner can normally be reached on Monday-Friday 7:00am-3:30pm.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Dickson can be reached on (703) 308-2089. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.



Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*Lana B. Rosenby*

LBR

  
**DAVID R. DUNN**  
PRIMARY **PATENT EXAMINER**